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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/526,873
Filing Date: March 04, 2005
Appellant(s): GADDAM ET AL.

Brian S. Myers
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 8/4/2009 appealing from the Office action mailed 3/4/2009.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US20050152411A1	Breti	07-2005
US20020194566A1	Bellier	12-2002
US6438569B1	Abbott	08-2002
US20020041608A1	Choi	04-2002
US6788710B1	Knutson	09-2004

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 2, 5-8, 10-12, 15-18, and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Breti et al. (US Patent Application No. 2005/0152411) in view of Bellier et al. (US Patent Application No. 2002/0194566).

Consider claim 1, Breti discloses a digital signal transmission apparatus **(see paragraph 0007 lines 1-2)** comprising:

a multiplexer having an output port **(see elements 186 and 190 in figure 11, which are taken together to collectively constitute said multiplexer)**,

an input port for inputting an information bit-stream **(see the multiplexer, element 190 in figure 11, where the top three input ports input information bit-streams, as disclosed in paragraph 0066 lines 1-3 and lines 6-12; see claim 2; further, see the multiplexer, element 186 in figure 11, where the inputs it receives include information bit-streams)** and

an input port for inputting a placeholder bit-stream **(see the multiplexer, element 190 in figure 11, where the bottommost input port inputs a placeholder bit-stream i.e. dummy stream, further disclosed in paragraph 0066 lines 12-17 and claim 3)**,

for multiplexing the bit-streams inputted from the input ports to form a multiplexed bit-stream for output on the output port **(see paragraph 0066 lines 17-20)**;

a data formatter for receiving the multiplexed bit-stream and for replacing bits of said placeholder bit-stream within the received multiplexed bit-stream with bits derived from an information bit-stream to form a modified bit-stream **(see interleaver and data replacer, elements 192 and 194 in figure 11, with the convolutional byte interleave of the interleaver and the dummy byte replacement of the data replacer, together combined, collectively perform the function of said data formatter, as disclosed in paragraph 0067; also, see claim 3)**;

an encoder for encoding the modified bit-stream to produce an encoded bit-stream **(see elements 204 and 208 in figure 11 and paragraph 0070)**;

a transmitter for transmitting the encoded bit-stream **(see element 202 in figure 11 and claim 62)**.

Breti does not specifically disclose replacing bits of the placeholder bit-stream of a given data stream with information bits derived from the same data stream.

Bellier teaches replacing bits of the placeholder bit-stream of a given data stream with information bits derived from the same data stream **(see abstract, elements 130 and 150, paragraphs 0009, 0011, and 0037, and claims 1 and 2, wherein disclosed is replacing dummy bits, i.e. bits of a placeholder bit-stream of a given data stream, with further bits of the same data stream, i.e. information bits derived from the same data stream)**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the inventions of Breti and replace bits of the placeholder bit-stream of a given data stream with information bits derived from the same data stream, as taught by Bellier, thus providing an efficient signaling mechanism **(see paragraph 0004)**.

Consider claim 2, Breti discloses that the deriving creates a new bit, but retains any bit from which derivation has occurred **(see paragraph 0068, where new bits and information are created after being outputted from the data replacer, but the original bits and information that the new data is created from is still retained)**.

Consider claim 5, Breti discloses that the multiplexer is configured with an additional input port for inputting an additional bit-stream **(see elements 162, 164, and 166 in figure 11, which each receive uncoded auxiliary bit-streams, which are additional bit-streams and are ultimately inputted to multiplexer; also, see paragraph 0064, lines 3-18)**.

Consider claim 6, Breti discloses that the multiplexer is configured to input a plurality of additional bit-streams **(see elements 162, 164, and 166 in figure 11, which each receive uncoded auxiliary bit-streams, which are additional bit-streams and are ultimately inputted to multiplexer; also, see paragraph 0064, lines 3-18)** ,

a plurality of information bit-streams **(see the multiplexer, element 190 in figure 11, where the top three input ports input information bit-streams, as disclosed in paragraph 0066 lines 1-3 and lines 6-12; see claim 2)**, and

a plurality of placeholder bit-streams through their respective input ports **(see the multiplexer, element 190 in figure 11, where all four inputs are configured to input placeholder bit-streams, although the top three inputs input placeholder and information bit-streams and the bottommost input exclusively inputs a place-holder bit-stream, as disclosed in paragraph 0066)** for said multiplexing to form said multiplexed bit-stream **(see paragraph 0066 lines 17-20)**,

each of the information bit streams to by multiplexed by the multiplexer having an identical number of bits **(see paragraph 0066 lines 1-3, where each information bit-stream has 3 bytes)**,

each of the placeholder bit-streams to be multiplexed by the multiplexer having an identical number of bits **(see paragraph 0066 line 4, where each dummy bit-stream has 184 placeholder bytes)**,

the multiplexer being configured to multiplex each of the information and placeholder bit-streams for their respective identical number of bits before selecting another bit-stream for multiplexing **(see element 190 in figure 11, where the information and placeholder bit-streams are first multiplexed, also disclosed in paragraph 0066, before selecting another bit-stream for multiplexing, which is from the output of multiplexer 186 in figure 11, also disclosed in paragraphs 0067 and 0068)**.

Consider claim 7, Breti discloses that said multiplexer is further configured to perform said multiplexing so as to select in succession, over a predetermined number of bit-streams, no more than three of said additional bit-streams **(see paragraph 0067 lines 5-8, which discloses that said addition bit-streams are successively selected and multiplexed (from multiplexer 186 in figure 11), which as is apparent from figure 11 and paragraph 0064 lines 3-18, has exactly three additional bit-streams i.e. no more than three additional bit-streams).**

Consider claim 8, Breti discloses that the multiplexer is further configured to perform said multiplexing so as to input in succession one or more of the additional bit-streams after each input of one of an information bit-stream and a placeholder bit-

stream **(see element 190 in figure 11, where the information and placeholder bit-streams are first multiplexed, also disclosed in paragraph 0066, before selecting the three additional bit-streams for multiplexing, which is from the output of multiplexer 186 in figure 11, also disclosed in paragraphs 0067 and 0068)**.

Consider claim 10, Breti discloses that said replacing comprises removing selected bits from said information bit-stream within said received multiplexed bit-stream and substituting the removed bits to replace bits of said placeholder bit-stream within said received multiplexed bit-stream **(see paragraph 0053 and claim 5)**.

Consider claim 11, Breti discloses a digital signal transmission method **(see paragraph 0007 lines 1-2)** comprising:

multiplexing an information bit-stream **(see the multiplexer, elements 186 and 190 in figure 11 (which are taken together, collectively, to constitute said multiplexing), where the top three input ports input information bit-streams, as disclosed in paragraph 0066 lines 1-3 and lines 6-12; see claim 2)** and

a placeholder bit-stream **(see the multiplexer, element 190 in figure 11, where the bottommost input port inputs a placeholder bit-stream i.e. dummy stream, further disclosed in paragraph 0066 lines 12-17 and claim 3)** to form a multiplexed bit-stream **(see paragraph 0066 lines 17-20)**;

receiving the multiplexed bit-stream and replacing bits of said placeholder bit-stream within the received multiplexed bit-stream with bits derived from an information

bit-stream to form a modified bit-stream **(see interleaver and data replacer, elements 192 and 194 in figure 11, with the convolutional byte interleave of the interleaver and the dummy byte replacement of the data replacer, together combined, collectively perform claimed function, as disclosed in paragraph 0067; also, see claim 3)**;

encoding the modified bit-stream to produce an encoded bit-stream **(see elements 204 and 208 in figure 11 and paragraph 0070)**; and

transmitting the encoded bit-stream **(see element 202 in figure 11 and claim 62)**.

Breti does not specifically disclose replacing bits of the placeholder bit-stream of a given data stream with information bits derived from the same data stream.

Bellier teaches replacing bits of the placeholder bit-stream of a given data stream with information bits derived from the same data stream **(see abstract, elements 130 and 150, paragraphs 0009, 0011, and 0037, and claims 1 and 2, wherein disclosed is replacing dummy bits, i.e. bits of a placeholder bit-stream of a given data stream, with further bits of the same data stream, i.e. information bits derived from the same data stream)**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the inventions of Breti and replace bits of the placeholder bit-stream of a given data stream with information bits derived from the same data stream, as taught by Bellier, thus providing an efficient signaling mechanism **(see paragraph 0004)**.

Consider claim 12, Breti discloses that the deriving creates a new bit, but retains any bit from which derivation has occurred **(see paragraph 0068, where new bits and information are created after being outputted from the data replacer, but the original bits and information that the new data is created from is still retained)**.

Consider claim 15, Breti discloses multiplexing an additional input port for inputting an additional bit-stream to form said multiplexed bit-stream **(see elements 162, 164, and 166 in figure 11, which each receive uncoded auxiliary bit-streams, which are ultimately inputted to multiplexer; also, see paragraph 0064, lines 3-18)**.

Consider claim 16, Breti discloses that the multiplexer is configured to input a plurality of additional bit-streams **(see elements 162, 164, and 166 in figure 11, which each receive uncoded auxiliary bit-streams, which are additional bit-streams and are ultimately inputted to multiplexer; also, see paragraph 0064, lines 3-18)**,

a plurality of information bit-streams **(see the multiplexer, element 190 in figure 11, where the top three input ports input information bit-streams, as disclosed in paragraph 0066 lines 1-3 and lines 6-12; see claim 2)**, and

a plurality of placeholder bit-streams through their respective input ports **(see the multiplexer, element 190 in figure 11, where all four inputs are configured to input placeholder bit-streams, although the top three inputs input placeholder and information bit-streams and the bottommost input exclusively inputs a place-**

holder bit-stream, as disclosed in paragraph 0066) for said multiplexing to form said multiplexed bit-stream **(see paragraph 0066 lines 17-20)**,

each of the information bit streams to by multiplexed by the multiplexer having an identical number of bits **(see paragraph 0066 lines 1-3, where each information bit-stream has 3 bytes)**,

each of the placeholder bit-streams to be multiplexed by the multiplexer having an identical number of bits **(see paragraph 0066 line 4, where each dummy bit-stream has 184 placeholder bytes)**,

the multiplexer being configured to multiplex each of the information and placeholder bit-streams for their respective identical number of bits before selecting another bit-stream for multiplexing **(see element 190 in figure 11, where the information and placeholder bit-streams are first multiplexed, also disclosed in paragraph 0066, before selecting another bit-stream for multiplexing, which is from the output of multiplexer 186 in figure 11, also disclosed in paragraphs 0067 and 0068)**.

Consider claim 17, Breti discloses that said multiplexer is further configured to perform said multiplexing so as to select in succession, over a predetermined number of bit-streams, no more than three of said additional bit-streams **(see paragraph 0067 lines 5-8, which discloses that said addition bit-streams are successively selected and multiplexed (from multiplexer 186 in figure 11), which as is apparent from**

figure 11 and paragraph 0064 lines 3-18, has exactly three additional bit-streams i.e. no more than three additional bit-streams).

Consider claim 18, Breti discloses that the multiplexer is further configured to perform said multiplexing so as to input in succession one or more of the additional bit-streams after each input of one of an information bit-stream and a placeholder bit-stream **(see element 190 in figure 11, where the information and placeholder bit-streams are first multiplexed, also disclosed in paragraph 0066, before selecting the three additional bit-streams for multiplexing, which is from the output of multiplexer 186 in figure 11, also disclosed in paragraphs 0067 and 0068)**.

Consider claim 20, Breti discloses that said replacing comprises selecting bits from said information bit-stream within said received multiplexed bit-stream, removing selected bits from said information bit-stream within said received multiplexed bit-stream and substituting the removed bits to replace bits of said placeholder bit-stream within said received multiplexed bit-stream **(see paragraph 0053 and claim 5)**.

3. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breti et al. (US Patent Application No. US 2005/0152411) in view of Bellier et al. (US Patent Application No. 2002/0194566) in further view of Abbott (US Patent No. 6,438,569).

Consider claim 3, Breti discloses replacing bits of the placeholder bit-stream with bits derived from the information bit-stream **(see paragraph 0067 and claim 3)**.

Breti and Bellier do not specifically disclose duplicating bits of the information bit-stream within the received multiplexed bit-stream to form duplicate bits and substituting the duplicate bits to replace bits of the placeholder bit-stream within the multiplexed bit-stream.

Abbot teaches duplicating bits of the information bit-stream within the received multiplexed bit-stream to form duplicate bits **(see col. 5 lines 30-32, wherein it is disclosed that data on the inputs, i.e. information within the received bit-stream, is duplicated, to form duplicate bites)** and substituting the duplicate bits to replace bits of the placeholder bit-stream within the multiplexed bit-stream **(see claims 16 and 22, wherein it is disclosed that the initial data bits are replaced, i.e. substituted)**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the inventions of Breti and Bellier and duplicate bits of the information bit-stream within the received multiplexed bit-stream to form duplicate bits and substituting the duplicate bits to replace bits of the placeholder bit-stream within the multiplexed bit-stream, as taught by Abbot, thus allowing for systems that are fast, cost-effective, and reconfigurable **(see col. 3 lines 51-53)**.

Consider claim 13, Breti discloses replacing bits of the placeholder bit-stream with bits derived from the information bit-stream **(see paragraph 0067 and claim 3)**.

Breti and Bellier do not specifically disclose duplicating bits of the information bit-stream within the received multiplexed bit-stream to form duplicate bits and substituting the duplicate bits to replace bits of the placeholder bit-stream within the multiplexed bit-stream.

Abbot teaches duplicating bits of the information bit-stream within the received multiplexed bit-stream to form duplicate bits **(see col. 5 lines 30-32, wherein it is disclosed that data on the inputs, i.e. information within the received bit-stream, is duplicated, to form duplicate bites)** and substituting the duplicate bits to replace bits of the placeholder bit-stream within the multiplexed bit-stream **(see claims 16 and 22, wherein it is disclosed that the initial data bits are replaced, i.e. substituted)**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the inventions of Breti and Bellier and duplicate bits of the information bit-stream within the received multiplexed bit-stream to form duplicate bits and substituting the duplicate bits to replace bits of the placeholder bit-stream within the multiplexed bit-stream, as taught by Abbot, thus allowing for systems that are fast, cost-effective, and reconfigurable **(see col. 3 lines 51-53)**.

4. Claims 4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breti et al. (US Patent Application No. US 2005/0152411) in view of Bellier et al. (US Patent Application No. 2002/0194566) in further view of Choi et al. (US Patent Application No. US 2002/0041608).

Consider claim 4, Breti discloses that the multiplexer is configured to multiplex an additional bit-stream in forming said multiplexed bit-stream **(see elements 162, 164,**

and 166 in figure 11, which each receive uncoded auxiliary bit-streams, which are additional bit-streams and are ultimately inputted to multiplexer; also, see paragraph 0064, lines 3-18);

a data formatter that performs said replacing **(see interleaver and data replacer, elements 192 and 194 in figure 11, with the convolutional byte interleave of the interleaver and the dummy byte replacement of the data replacer, together combined, collectively perform the function of said data formatter, as disclosed in paragraph 0067; also, see claim 3)**,

and the encoder is configured to process every bit of said modified bit-stream when operating on bits derived from said additional bit-stream **(see paragraph 0070)** and

to process every other bit of said modified bit-stream when operating on bits derived from said information bit-stream **(see paragraphs 0072 and 0080)**.

Breti and Bellier do not specifically disclose that the data formatter is configured to bypass said replacing when operating on said additional bit-stream within said received multiplexed bit-stream.

Choi teaches that the data formatter is configured to bypass said replacing when operating on said additional bit-stream within said received multiplexed bit-stream **(see paragraphs 0052, 0053, and 0054; where it is disclosed that the randomizer, i.e. a data formatter, bypasses replacing when operating on multiplexed additional and ATSC data, i.e. the additional bit-stream within said received multiplexed bit-stream)**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the inventions of Breti and Bellier and have the data formatter configured to bypass said replacing when operating on said additional bit-stream within said received multiplexed bit-stream, as taught by Choi, thus allowing a DTV system robust to noise **(see paragraph 0016)**.

Consider claim 14, Breti discloses that the multiplexer is configured to multiplex an additional bit-stream in forming said multiplexed bit-stream **(see elements 162, 164, and 166 in figure 11, which each receive uncoded auxiliary bit-streams, which are additional bit-streams and are ultimately inputted to multiplexer; also, see paragraph 0064, lines 3-18)**;

a data formatter that performs said replacing **(see interleaver and data replacer, elements 192 and 194 in figure 11, with the convolutional byte interleave of the interleaver and the dummy byte replacement of the data replacer, together combined, collectively perform the function of said data formatter, as disclosed in paragraph 0067; also, see claim 3)**, and

the encoder is configured to process every bit of said modified bit-stream when operating on bits derived from said additional bit-stream **(see paragraph 0070)** and

to process every other bit of said modified bit-stream when operating on bits derived from said information bit-stream **(see paragraphs 0072 and 0080)**.

Breti and Bellier do not specifically disclose that the data formatter is configured to bypass said replacing when operating on said additional bit-stream within said received multiplexed bit-stream.

Choi teaches that the data formatter is configured to bypass said replacing when operating on said additional bit-stream within said received multiplexed bit-stream **(see paragraphs 0052, 0053, and 0054; where it is disclosed that the randomizer, i.e. a data formatter, bypasses replacing when operating on multiplexed additional and ATSC data, i.e. the additional bit-stream within said received multiplexed bit-stream)**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the inventions of Breti and Bellier and have the data formatter configured to bypass said replacing when operating on said additional bit-stream within said received multiplexed bit-stream, as taught by Choi, thus allowing a DTV system robust to noise **(see paragraph 0016)**.

5. Claims 9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breti et al. (US Patent Application No. US 2005/0152411) in view of Bellier et al. (US Patent Application No. 2002/0194566) in further view of Knutson et al. (US Patent No. 6,788,710).

Consider claim 9, Breti discloses that the plural bit-streams are identical in length **(see paragraph 0066 lines 1-3, where each information bit-stream has 3 bytes and see paragraph 0066 line 4, where each dummy bit-stream has 184 placeholder bytes)**.

Breti also discloses inputting of one of an information bit-stream **(see the multiplexer, element 190 in figure 11, where the top three input ports input information bit-streams, as disclosed in paragraph 0066 lines 1-3 and lines 6-12; see claim 2)** and a placeholder bit-stream **(see the multiplexer, element 190 in figure 11, where the bottommost input port inputs a placeholder bit-stream i.e. dummy stream, further disclosed in paragraph 0066 lines 12-17 and claim 3)**.

Breti and Bellier do not specifically disclose that the inputting of one of an information bit-stream and a placeholder bit-stream successively alternates, over at least most inputs of the one information or placeholder bit-streams, between an information bit-stream and a placeholder bit-stream.

Knutson teaches that the inputting of one of an information bit-stream and a placeholder bit-stream successively alternates, over at least most inputs of the one information or placeholder bit-streams **(see figure 4, where the bit-streams inputted to multiplexer 44 (one of an information bit-stream and one of an auxiliary and null bit-stream) are alternated; further disclosed in col. 4 lines 46-67)** between an information bit-stream and a placeholder bit-stream **(see col. 5 lines 1-7, where datastream 30 is an information bit-stream and the null stream is a placeholder bit-stream).**

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the inventions of Breti and Bellier and have the inputting of one of an information bit-stream and a placeholder bit-stream successively alternates, over at least most inputs of the one information or placeholder bit-streams,

between an information bit-stream and a placeholder bit-stream, as taught by Knutson, thus allowing simple and efficient means to insert auxiliary data into a datastream **(see col. 2 lines 16-20)**.

Consider claim 19, Breti discloses that the plural bit-streams are identical in length **(see paragraph 0066 lines 1-3, where each information bit-stream has 3 bytes and see paragraph 0066 line 4, where each dummy bit-stream has 184 placeholder bytes)**.

Breti also discloses inputting of one of an information bit-stream **(see the multiplexer, element 190 in figure 11, where the top three input ports input information bit-streams, as disclosed in paragraph 0066 lines 1-3 and lines 6-12; see claim 2)** and a placeholder bit-stream **(see the multiplexer, element 190 in figure 11, where the bottommost input port inputs a placeholder bit-stream i.e. dummy stream, further disclosed in paragraph 0066 lines 12-17 and claim 3)**.

Breti and Bellier do not specifically disclose that the inputting of one of an information bit-stream and a placeholder bit-stream successively alternates, over at least most inputs of the one information or placeholder bit-streams, between an information bit-stream and a placeholder bit-stream.

Knutson teaches that the inputting of one of an information bit-stream and a placeholder bit-stream successively alternates, over at least most inputs of the one information or placeholder bit-streams **(see figure 4, where the bit-streams inputted to multiplexer 44 (one of an information bit-stream and one of an auxiliary and**

null bit-stream) are alternated; further disclosed in col. 4 lines 46-67) between an information bit-stream and a placeholder bit-stream **(see col. 5 lines 1-7, where datastream 30 is an information bit-stream and the null stream is a placeholder bit-stream).**

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the inventions of Breti and Bellier and have the inputting of one of an information bit-stream and a placeholder bit-stream successively alternates, over at least most inputs of the one information or placeholder bit-streams, between an information bit-stream and a placeholder bit-stream, as taught by Knutson, thus allowing simple and efficient means to insert auxiliary data into a datastream **(see col. 2 lines 16-20)**.

(10) Response to Argument

Section A: Claims 1, 2, 5-8, 10-12, 15-18, and 20

1. Claim 1

Appellants argue that "*the final Office action suggests that the multiplexers 186 and 190 in figure 11 of Breti were newly taken together* [Examiner notes that this was "newly taken together" in the Non-Final Action mailed on September 16, 2008] *to collectively constitute the multiplexer of Appellants' claimed invention. The Office action alleges that this manner of combining the two multiplexers constitutes one multiplexer, thereby suggesting Breti teaches that the replacing of the placeholder bit-stream is done with information bits within the same stream. Appellants disagree and respectfully*

submit that even if the multiplexers 186 and 190 of figure 11 of Breti are taken to collectively constitute the multiplexer of Appellant' claimed invention, Breti fails to suggest a data formatter for receiving the multiplexed bit-stream and for replacing bits of the placeholder bit-stream derived from the same information bit-stream" and "*[t]he Office action equates the elements 192 and 194 of Breti at figure 11 with the Appellants' claimed data formatter. Breti's data formatter (i.e. the combination of elements 192 and 194 of figure 11) receives two distinct multiplexed bit-streams; (1) the output of mux_2 186 and (2) the output of mux_1 190. This is in complete contrast with Appellants' claimed invention, which requires the data formatter to receive a multiplexed bit-stream and to replace bits from a placeholder bit-stream from within the multiplexed bit-stream with bits from the same information bit-stream*." Appellants then proceed to discuss the allegedly two distinct multiplexed bit-streams of Breti and argue that "*[a]s such, the data formatter of Breti receives two separate and distinct multiplexed bit-streams. Therefore, Breti does not teach, disclose or even suggest replacing bits from a placeholder bit-stream from within the multiplexed bit-stream with bits from the same information bit-stream. Furthermore, Breti does not teach or suggest the data formatter to receive a multiplexed bit-stream*."

In response, Examiner respectfully disagrees. Examiner has *three* separate, mutually-exclusive, independent counter-arguments for Appellants' essential argument above. That is, any one of Examiner's three independent counter-arguments is sufficient to fully and completely respond to Appellants' arguments, but Examiner wishes to set

forth all three independent arguments in order to assert the strength in Examiner's counter-argument.

FIRST, Examiner contends that, although the Appellants acknowledge that "*…the multiplexers 186 and 190 of figure 11 of Breti are taken to collectively constitute the multiplexer of Appellant' claimed invention*" the very crux of Appellants' argument is based on NOT taking said multiplexers 186 and 190 to collectively constitute the multiplexer of Appellants' claimed invention. That is, the Appellants' core argument is centered on attacking the fact that Breti receives two separate and distinct multiplexed bit-streams due to the face that there are two separate and distinct multiplexers. However, since the two multiplexers are being taken together to constitute ***one*** multiplexer (and Appellants acknowledge and accept this, before proceeding with their arguments), the outputs of these two multiplexers must then ***also*** be taken together to constitute the output from ***one*** multiplexer. Therefore, although Appellants take the multiplexers 186 and 190 to constitute one multiplexer as Examiner has interpreted, Appellants proceed to ***incorrectly*** treat the multiplexers as separate and distinct in order to advance their argument. Thus, Appellants completely contradict their very own argument.

SECOND, Appellants repeatedly argue that the prior art references relied upon by Examiner do not replace the bits from the placeholder bit-stream within the multiplexed bit-stream with bits from the *same* information bit-stream. That is, Appellants repeatedly emphasize the term "same" in making their arguments. *However*, Examiner contends that the term "same" is **completely absent** from the claim

language; nowhere in the independent claims that Appellants are arguing against is the term "same" ever recited. Although Appellants are using the term "same" to reference the limitation "said received multiplex bit-stream" of the independent claims, the usage of the term "same" is *significantly* narrower in the context of Appellants' argument. In fact, by relying on their argument by emphasizing that Breti allegedly does not replace placeholder bits with information bits from the *same* bit-stream (as opposed to arguing, as Appellants *should* have, that Breti does not replace placeholder bits with information bits *within said received multiplex bit-stream*, as is recited in the independent claims), Appellants are able to better advance their incorrect position of arguing against the separate and distinct nature of multiplexers 186 and 190, although Appellants acknowledge that said multiplexers are to be taken together as *one* (as discussed above). Thus, in the context of the claim language and, especially in the context of the aspect being argued (namely, taking multiplexers 186 and 190 to constitute a single multiplexer), Appellants' use of the term "same" is much narrower than what is written in the claim language. If Appellants' argument relied upon the language actually used in the claims (i.e., "said received multiplexed bit-stream"), this would significantly weaken Appellants' argument, especially since the actual claim language is broader than what Appellants are arguing (again, in the context of what is being argued and discussed).

THIRD, even assuming that the multiplexers 186 and 190 of Breti were not taken to constitute a single multiplexer and, even further, assuming that Breti did not at all teach the limitation that Appellants' are arguing (which Examiner in no way concedes or admits), Appellants argument is *still* defective because Examiner included the

secondary reference of Bellier *solely* to teach the aspect of replacing bits of a placeholder bit-stream with information bits derived from the same data stream. That is, not only does the reference of Bellier act as a manner to reinforce Examiner's argument, but Examiner uses Bellier to teach the limitation in dispute *even using Appellants narrower interpretation of using the term "same"* (as discussed in the previous section immediately above). Appellants acknowledge that Bellier "*appears to disclose a method of transmitting a signaling message by using the Slow Associated Control Channel (SACCH), wherein a plurality of dummy bits are inserted into the SACCH block, and then the dummy bits in each SACCH block are replaced by the inband signaling for transmission*." However, Appellants argue that "*in complete contrast to Appellants' claimed invention, the SACCH block and the signaling message are clearing not derived from the same data stream. For example, in the last sentence of paragraph [0037], Bellier discloses that the signaling message can be derived from a Fast Power Control signal. As such, Bellier does not teach, disclose, or even suggest the feature of replacing bits of said placeholder bit-stream with bits derived from the same information bit-stream*." In response, and most importantly, Examiner notes that, as Appellants correctly state, the last sentence of paragraph [0037] of Bellier recites that the "signaling message can be derived from a Fast Power Control signal." (emphasis on the term "can" added). Thus, this is merely a non-limiting example. Claims 1-3 of Bellier clearly teach the limitation that Examiner relied upon (i.e., to teach replacing bits of a placeholder bit-stream with information bits derived from the same data stream). *In addition*, in claims 1-3 of Bellier, the relevant portion teaches "*placing further bits into*

parts of the available bits…inserting a plurality of dummy bits into at least part of the available bits…and replacing the dummy bits in the interleaved block with the further bits." Thus, even with Applicant's narrow and incorrect way of reading the term "same" into the claimed language (as opposed to the much broader term "received", as is actually recited in the claim language), the cited portion of Bellier *clearly* teaches replacing bits of a placeholder bit-stream (i.e., the dummy bits of Bellier) with information bits derived from the same data stream (i.e., the further bits of Bellier). Again, to further strengthen Examiner's position, Examiner re-incorporates the remarks from the previous section above regarding the difference between Appellants use of the term "same" as opposed to what is actually recited in the claim language.

2. Claim 11

Examiner re-incorporates the above remarks, since Appellant's arguments for this section repeat the above arguments.

3. Claims 2, 5-8, 10, 12, 15-18, and 20

Examiner re-incorporates the above remarks, since Appellant's arguments for this section repeat the above arguments.

Section B: Claims 3 and 13

4. Claims 3 and 13

Examiner re-incorporates the above remarks, since Appellant's arguments for this section repeat the above arguments.

In addition, Appellant argues that "*the Office is simply providing conclusory statements to support the cited references in making this rejection*."

In response, Examiner respectfully disagrees. The cited portions of Abbot for said claims teaches duplicating bits of the information bit-streams within received multiplex bit-streams to form duplicate bits (see col. 5 lines 30-32, wherein it is disclosed that data on the inputs, i.e. information within the received bit-stream, is duplicated, to form duplicate bites), as well as substituting the duplicate bits to replace bits of the placeholder bit-stream within the multiplexed bit-stream (see claims 16 and 22, wherein it is disclosed that the initial data bits are replaced, i.e. substituted). Since Appellants' invention is directly involved in modifying bits of a received information bit-stream as well as replacing bits of a placeholder bit-stream, *just as in Abbott*, it would have been obvious to one of ordinary skill in the art to have modified Appellant's invention to reflect the teachings of Abbott, in order to provide modified bit-streams that are modified for the purpose of enhancing stream efficiency, which ultimately achieves the greater goal stated in Abbott of allowing for the implementation of systems which are fast, cost-effective, and reconfigurable (see col. 3 lines 51-53).

Section C: Claims 4 and 14

5. Claims 4 and 14

Examiner re-incorporates the above remarks, since Appellant's arguments for this section repeat the above arguments.

Section D: Claims 9 and 19

6. Claims 9 and 19

Examiner re-incorporates the above remarks, since Appellant's arguments for this section repeat the above arguments.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Conclusion

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Jamal Javaid/

Examiner, Art Unit 2474

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Jamal Javaid
November 6, 2009

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